

Report on Science Diplomacy Forum.

Introduction

The session on Science Diplomacy organized by the [Science Diplomacy in the Americas working group of the Global Young Academy \(GYA\)](#) convened esteemed experts from various organizations and diplomatic missions (program attached) to discuss the critical role of science in fostering international relations and addressing global challenges. Throughout the session, key insights were shared regarding the significance of maintaining scientific connections amidst political and economic collapse, building trust through science diplomacy, promoting equity in international agreements, and leveraging science for innovations and solutions. Here the organizers summarize the main discussion points and the exchange of comments and ideas that made this event a fruitful one.

Important remarks

- **Science Diplomacy for Peace.** Science diplomacy serves as a conduit for maintaining dialogue and cooperation even in the face of broken political ties and economic collapses.

Notable examples include NASEM programs engaging with China and other politically sensitive countries to sustain dialogue and collaboration despite geopolitical challenges.

- **Trust in Science Diplomacy.** Building trust between scientific communities and societies emerged as a crucial aspect of science diplomacy.

The RAICES program, which engages the Argentine diaspora to facilitate knowledge exchange and collaboration, exemplifies how science diplomacy can foster relationships abroad.

- **Science Diplomacy for Equity.** Participants emphasized the importance of ensuring that international agreements in science diplomacy are reciprocal and not imposed. Equity in scientific collaborations was underscored as essential for fostering mutual benefit and cooperation among nations.

- **Science Diplomacy for Innovations and Solutions.** Science diplomacy was lauded for its potential to drive innovation and provide solutions to global challenges.

Examples such as technology transfer for water purification between the EU and India and EU-Africa startups demonstrate the tangible impact of science diplomacy on addressing pressing issues.

Examples of impactful science diplomacy initiatives, with special focus in US and Global North to Global South.

- NASEM manages different programs, including PEER (Partnerships for Enhanced Engagement in Research), a competitive grants program that invites scientists from the Global South to apply for funds to support research and capacity-building activities on topics with strong development impact. Another example is AccelNet, PEER2PEER International Convergence Research Networks in Transboundary Water Security, which brings together

global networks focusing on transboundary water management (such as the Asia-Africa border). Remarkable initiatives that allow the creation of new partnerships for scientists are the itinerant regional Frontiers Programs and science, engineering, and health engagement with Iran.

- AAAS approaches science diplomacy through relationship building and capacity building programs, along with a highly visible journal that provides a global and interdisciplinary platform for highlighting the theory and practice of science diplomacy. An outstanding effort is the facilitation of visits to the US of a Cuban scientific delegation, that allowed a meaningful exchange of knowledge and dialogues.

Science Diplomacy with TWAS: The relationship-building programs focus on capacity building through initiatives like the Science Diplomacy course offered in collaboration with The World Academy of Sciences (TWAS). This course pairs scientists and policymakers within the same application to enhance mutual understanding and cooperation.

Science & Diplomacy Journal, a free open online journal, that publishes articles and research on the intersection of science and international relations, fostering a community of informed practitioners and scholars. They also launched a series of conversations with ambassadors.

- The US Department of State, through the Office of Science and Technology Cooperation, Bureau of Oceans and International Environmental and Scientific Affairs engages in bilateral agreements for collaborations in science and technology, welcoming diverse expertise and exploring researcher exchanges on regionally relevant topics. This includes programs like the Science Fellows Program and science diplomacy capacity-building initiatives, such as the South America One Health program, AI initiatives in the Caribbean, Central America, and Chile, and the Fulbright Amazon Program. The Embassy Fellows Program supports many of these efforts, with embassies worldwide submitting and applying for initiatives locally. Another remarkable example, is collaboration between countries and specific organizations, like between Costa Rica and the Smithsonian Institution on disease research.
- Argentina has developed an interesting global initiative, the Raíces program, which aims to foster contributions from Argentine researchers abroad and connect them with local researchers to benefit from their expertise in an effort to reconnect the scientific diaspora for knowledge exchange and collaboration. As of 2023, the program has established 24 networks in 25 countries, in the US there are two networks (East and West). Additionally, there are initiatives involving companies that export goods or services, contributing to the country's scientific and economic growth. Argentina benchmarks cooperation in various fields such as satellite technologies, nuclear science, and biomedical research. Their embassy in Washington DC is also part of the Women in Science Diplomacy network, and the Science Diplomacy Club.
- Australia has established significant scientific and technological initiatives and partnerships both regionally and with like-minded partners and allies such as the USA. Australia is broadening and deepening areas of bilateral cooperation with the USA in line with Australia's regional priorities, including in emerging technologies (such as AI and quantum), clean energy transition and critical minerals mining and processing. Australia's National Science Agency (the Commonwealth Scientific and Industrial Research Agency – CSIRO) has a number of initiatives collaborating together with USA Government Federal agencies. Examples include the USA National Science Foundation, Department of Energy and National labs, Department of Homeland Security and the National Institute of Health; focused on

science and innovation collaborations, knowledge (including traditional knowledge systems), data and personnel exchanges, organization to organization ties and also encouraging greater indigenous and first nations scientific researcher connections, engagement and contributions to ensure that science benefits all communities. Australia recently established a USA State level bilateral agreement with the California Government focused on working together to address climate change and support clean energy transition, including research collaboration as a key pillar. Australia and the US are working together, both bilaterally and through multilateral platforms like APEC and IPEF, including advancing climate goals through R&D collaborations. Closer to, Australia's region, examples of significant science diplomacy efforts include the Australia-Singapore Initiative on Low-Emissions Technologies for Maritime and Port Operations establishing green and digital shipping corridors between the two countries, Australia-Indonesia Health Security Partnership, and the Aus4Innovation program with Vietnam working together to explore emerging areas of technology and digital transformation. Additionally, a critical focus for Australia through Australia's National Science Agency, CSIRO is to advocate and build trust in science both nationally and internationally.

- For the EU, it is important to, during political and economic issues, maintain scientific connections. The EU's science diplomacy aims to connect scientists globally to promote international collaborations. For example, the EU sponsors extensive research in the Arctic which holds geopolitical importance for climate monitoring and biodiversity. To address current challenges in Ukraine, at the individual level, the EU has dedicated programs for Ukrainian scientists, including support for those who stayed in Ukraine. Through the Horizon Program, the EU research and innovation program, funding calls are open to the world, and currently involve more than 140 participating countries and funds researchers from Low- and Middle-Income Countries. About 65% of its efforts focus on contributing to resolve Sustainable Development Goals (SDGs). Bi- and multilateral initiatives include among other, the development of water purification technologies between the EU and India, the support of a network of startup incubators addressing common problems between the African Union and the European Union, and projects with Arctic nations on a wide variety of issues.

A collective take on challenges, key determinants and future contributions:

Forum participants engaged in a group discussion session, discussing the trigger questions below. Here are the key points gathered from each group.

Challenges: What do you think are the biggest obstacles/challenges to develop science diplomacy and relevant strategies in your country or globally?

- Challenges stem from the different cultural and political landscapes, the limited technical capacity of decisions-makers and researchers, the differing political priorities and realities, restrictions and control of international science collaboration and resources.

- Lack of channels between scientists and governments. There is a need for science advice and diplomacy structures in many countries. Diplomacy for science may not be an agenda priority.

- *Science diplomacy versus politics. Science diplomacy is not recognized as a serious topic. Science diplomacy could be seen as political normalization. Different perceptions of time for a project/initiative in science versus governments.*

- *How to do science diplomacy on a one-on-one level?*

- *How to create structures and success metrics around something that happened organically?*

- *How to adapt the concept of science diplomacy to the reality of each country?*

- *Lack of training in science diplomacy and science communication.*

- *Issues around security, foreign interference, and resourcing.*

- *Data sharing practices, research integrity versus research security, differences in intellectual property regulations.*

Key determinants: Think of successful science diplomacy initiatives you may know, what do you consider are their determinants of success?

- *Bilateral agreements, shared challenges.*

- *Science “translators” for politicians.*

- *Engagement of science communicators, including journalists.*

- *Inclusion of non-scientists.*

- *Openness, transparency, communication of impact and value, public perception, community relations, leadership, pre-established trust in scientist.*

Contributions: Concrete steps you could take in your current role if you wanted to be part of science diplomacy strategies/initiatives.

- *NGOs and academies can give continuity to initiatives, independent of the government.*

- *Promote training.*

- *To build relevant networks of scientists. Support relationships and nurture dialogues.*

- *Engagement of early career researchers. Enable diverse viewpoints and research in these initiatives.*